SPECTROSCOPIA MOLECULAR

UN PERIODICO MENSUAL DE NOVAS E INFORMATIONES DE INTERESSE E VALOR AL SPECTROSCOPISTAS MOLECULAR

Volumine 6 | April 1957 | Numero 60

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SPECTROSCOPIA MOLECULAR ha essite redigite e publicate mensualmente depost Maio 1952 per Prof. Forrest F. Cleveland del Departimento de Physica del Instituto Technologic de Illinois in Chicago. Pro assecurar un plus facile lectura per le plus grande numero del spectroscopistas, le periodico es scribite in le lingua international, Interlingua. Manuscriptos e novas e informationes, tanto como abonamentos e ordines pro monographias, debe esser inviate a

Spectroscopia Molecular
Instituto Technologic de Illinois
Chicago 16, Illinois
Statos Unite de America.

Le texto original es legite per Dr. Alexander Gode, Chef del Division de Interlingua de Science Service (80 East 11th St., New York 3, N. Y., S.U.A.). Libros super Interlingua, disponibile ab ille adresse, es Interlingua-English Dictionary, Interlingua Grammar, Interlingua A Prime Vista, Interlingua in 20 Lektionen, Interlingua en 20 Leçons, Interlingua in 20 Lezioni, e Homo Sonetticus Moorensis (un bellemente imprimite parve libro de poemas con illustrationes).

Labor editorial es gratis. Le costo de preparation e distribution es recipite ab spectroscopistas, bibliothecas, e companias que beneficia del existentia de Spectroscopia Molecular. Il ha nulle altere medios de supporto. Omne le receptas es usate pro le mantenimento e melioration del periodico.

Assistentes de publication es Srta. Coleen Byrne e Srs. Jerome M. Dowling e Edward A. Piotrowski. Le imprimer es facite per Tom Wilson e per Jean, Lilly, Chicki, e Alice del Servicios de Bureau al Instituto Technologic de Illinois sub le direction de Srta. Virginia Brown.

Il ha 12 numeros per anno e le precio de abonamento es $2.00 nette, franc de posta. Volumines passate del annos 1952, 1953, 1954, e 1955 es $3.00 nette per cata un, franc de posta. Numeros individual es $0.25 per cata un, franc de posta. Le periodico pote esser inviate per posta aeree si le subscriptor provide le costo de postar additional. (Face cheques pagabile a Spectroscopia Molecular.)

Companias pote attachar un pagina de informationes in re lor productos, si illos es de interesse a spectroscopistas molecular.

MONOGRAPHIAS. Duo monographias es disponibile. Illos es:

Spectros Molecular. I. Regulas de Selection pro Spectros Vibrational de Moleculas Polyatomic, per Forrest F. Cleveland, 1953, 25 paginas, $0.75 nette.

Spectros Molecular. II. Tractamentos del Coordinatas Normal de Moleculas Polyatomic, per Salvador M. Ferigle e Alfons Weber, 1955, 30 paginas, $1.00 nette.

SPECTROSCOPIA MOLECULAR

Volumine 6 | April 1957 | Numero 60

"JOURNAL OF MOLECULAR SPECTROSCOPY" FACERA SU DEBUT

Volumine 1, Numero 1, va esser publicate in maio 1957

H A R A L D H. NIELSEN va esser le redactor de un nove jornal, le "Journal of Molecular Spectroscopy", que essera publicate per Academic Press, Inc. Dr. Nielsen va esser assistite per un consilio redactorial advisori que consiste de

Børge Bak,	W. S. Benedict,
Bryce Crawford,	David M. Dennison,
Michael Kasha,	P. O. Löwdin,
S. Mizushima,	James N. Shoolery,
C. H. Townes,	H. L. Welsh, e
G. B. B. M. Sutherland.	

Le jornal essera dedicate al publication de articulos de recerca original que tracta del spectros molecular ultraviolette, visibile, infrarubie, e microundic. Etiam includite essera articulos super le spectroscopia Raman e le spectroscopia a frequentias radionic, includente le spectroscopia de resonantia nucleari magnetic.

Le nove periodico acceptara etiam articulos super le mesuration del intensitates e largores de lineas tanto como le interpretation del spectros, le dynamica molecular, e le energias electronic de moleculas. Manuscriptos e experimental e theoric es acceptabile.

Le jornal essera de interesse e valor a physicos e chimistas qui ha le necessitate de informationes in re le structuras de moleculas, le fortias del ligamines chimic, le parametros molecular, le intensitates, e le momentos de dipolo.

Articulos de recerca essera publicate si rapidemente como possibile, e 50 reimpressiones essera inviate al autor sin costo. Ni le autor ni su institution es requirite pagar alicun parte del costo de publication. Il ha nulle precio per pagina ("page charge") al autor o su institution.

Le prime volumine va esser publicate durante le anno 1957 e consistera de 4 numeros. Le prime numero apparera in maio. (Es de interesse notar que "Spectroscopia Molecular" etiam faceva su prime apparentia in le mense de maio -- in 1952. Il pare que maio es le mense pro le comenciamento de periodicos spectroscopic. Forsan comenciarea in maio 1958 un jornal con articulos plus comprehensive e internemente complete que esserea appellate le "Revistas de Spectroscopia Moderne" Un tal jornal de revista esserea un grande servicio al spectroscopistas molecular.)

Abonamentos al "Journal of Molecular Spectroscopy" debe esser inviate al

o-o-o-o-o-o-o-o-o-o-o-o- GEMMA DE SAGESSA -o-o-o-o-o-o-o-o-o-o-o-o-o-o-o

A L I C U N inactivitate es essential pro omne projectos creative. Il es precisemente quando on face nihil, non mesmo realmente pensante, que le pensata occurre que ha evadite al cerca consciente, o le solution de un problema subitemente appare toto insollicitate.

-- DOROTHY THOMPSON.

Academic Press, Inc., 111 5th Ave., New York 3, N. Y., S.U.A. Le precio es $10 per anno.

Manuscriptos pro publication in le nove jornal debe esser inviate si tosto como possibile a Prof. Harald H. Nielsen, Departimento de Physica e Astronomia, Universitate Ohio State, Columbus 10, Ohio, S.U.A. Secundo Dr. Nielsen, manuscriptos es nunc acceptate.

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NOVAS E MISCELLANEA

ARNOLD G. MEISTER ha acceptate un position como Professor de Physica al Collegio Statal de Arizona a Tempe, comenciante in septembre 1957.

-o-

S. MROZOWSKI del Universitate Buffalo ha retornate ab un visita de 6 menses in Europa.

-o-

EARL R. STEPHENS del laboratorios del Instituto Franklin pro Recerca e Disveloppamento parlava a un assemblea juncte del sectiones New York e Philadelphia del Societate de Spectroscopia Applicate super "le spectroscopia infrarubie a passages longe pro recerca super le pollution del aere".

-o-

JOHN STRONG al tempore (octobre 1956) de su recepta del medalia Frederic Ives ab le Societate Optic de America (vide Spec. Mol. 6 (1957) 7) presentava un discurso super "le interferometria in le infrarubio remote". Diceva Dr. Strong: "Nos ha 2 projectos al Universitate Johns Hopkins (Baltimore, Md., S.U.A.) pro applicar le interferometria al spectroscopia infrarubie. Un applica le interferometria a fasces multiple, le altere a solmente 2 fasces. Per le infrarubio remote, nos significa le region ubi pelliculas tenue de metallo non es de uso." Ille tunc discuteva le avantages e limitationes de iste applicationes e revideva le progresso usque a ille tempore.

-o-

O. S. HEAVENS discuteva le filtros infrarubie al assemblea del Gruppo de Discussion Infrarubie al King's College in London le 27 de septembre.

-o-

WALTER EDGELL del Universitate Purdue a Lafayette in Indiana ha discoperite un nove typo de ligamine chimic, secundo le Aminco Laboratory News (Charles L. Schuettler, Redactor; American Instrument Company, 8030 Georgia Ave., Silver Spring, Md., S.U.A.). Isto aperi large horizontes de recerca e jecta nove lumine super le natura de catalysatores.

Dr. Edgell trovava que in le carbonylo de cobalt, $Co(CO)_4H$, le atomo H es ligate a 3 del 4 gruppos de carbonylo, CO, e etiam al atomo de cobalt. Previemente il esseva credite que le H esseva attachate o a un del gruppos CO o solmente al atomo Co. Sed le studios spectroscopic da resultatos que esseva incompatibile con iste vistas.

Le "modello ponte" de Dr. Edgell es supportate per le studios spectroscopic. In addition, illo es substantiate per mesurationes del maniera in le qual le nucleo del atomo H orienta su axe de precession intra le campo magnetic del nube electronic del molecula (resonantia magnetic nucleari).

Le hydridos de carbonylo metallic tal como le composito studiate in iste projecto es usate como catalysatores in fabricar gasolina e alcohol.

Iste reporto appareva in le numero de novembre del supra-mentionate periodico. Illo es reproducite hic in traduction per permission del redactor.

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LE ASSOCIATION SPECTROSCOPIC DEL WEST (organisate in 1953) teneva su 4te convention annue al Universitate California a Los Angeles le 24 e 25 de januario.

Le programma consisteva de discursos invitate super le nove disveloppamentos in le spectroscopia, con ample tempore pro discussion.

(continuate al pagina 22, columna 1)

SPECTROS MOLECULAR. III.
TRACTAMENTOS DEL COORDINATAS NORMAL DE MOLECULAS POLYATOMIC
B. APPLICATIONES SPECIFIC

Forrest F. Cleveland, Arnold G. Meister, e Fred L. Voelz
Instituto Technologic de Illinois, Chicago 16, Illinois, Statos Unite de America

Parcella 14, continuate ab Spec. Mol. 6 (1957) 16

7. CONSTANTES DEL ENERGIA POTENTIAL

7A. Constantes de Tender del Ligamine

T R A C T A M E N T O S del coordinatas normal pro proxime a 40 methanos substituite, in le quales le substituente es un singule atom (non un radical), ha essite completate in le laboratorio del autores. In iste labor, un function quadratic le plus general esseva usate pro le energia potential. Es trovate que le valores numeric del constantes in le expression pro le energia potential pote esser transferite ab iste moleculas a un molecula cuje constantes es incognite, si iste molecula ha simile ligamines e angulos interligaminic. Le numeros de undas assi calculate se concorda con le valores observate intra 2 a 5 per cento. Un melior concordantia pro un molecula particular pote tunc esser obtenite per parve modificationes de alicunes del constantes. In general, le concordantia final es intra 2 per cento.

Proque le constantes numeric obtenite usque nunc es de uso pro calcular le numeros de undas pro altere moleculas, e proque iste constantes es de valor in le calculation del intensitates del bandas vibrational, il pare esser de alicun importantia listar iste constantes hic.

In Tabula 7A-1 es date le valores numeric del constantes de tender del ligamine in mdyn/Å. Includite es le constantes f_h, f_f, f_c, f_b, e f_i, ubi h = C-H, f = C-F, c = C-Cl, b = C-Br, e i = C-I.

Altere constantes va esser date in le tabulas sequente. Istos includera le constantes de angulo e de interaction.

Tabula 7A-1. Constantes de tender del ligamine in mdyn/Å.

Molecula	f_h	Molecula	f_h
CCl_3H	4,8002	$CHFBr_2$	5,0428
CCl_3D	4,8002	CH_2Br_2	5,0455
CBr_2HCl	4,8642	$CHDBr_2$	5,0455
CBr_2DCl	4,8642	CD_2Br_2	5,0455
CBr_3H	4,8828	CH_3F	5,0511
CBr_3D	4,8828	CH_2DF	5,0511
CH_2I_2	4,9688	CD_2HF	5,0511
$CDBrF_2$	4,9768	CD_3F	5,0511
$CHBrF_2$	4,9768	CH_3I	5,0541
CH_2F_2	4,9791	CD_3I	5,0541
$CHDF_2$	4,9791	CH_2ClBr	5,0656
CD_2F_2	4,9791	$CHDClBr$	5,0656
$CHBrCl_2$	5,0099	CD_2ClBr	5,0656
$CDBrCl_2$	5,0099	CH_3Br	5,1199
CF_3H	5,0323	CH_2DBr	5,1199
CF_3D	5,0323	CD_2HBr	5,1199
		CD_3Br	5,1199
Molecula	**f_f**	**Molecula**	**f_f**
CCl_3F	4,9447	$CHDF_2$	6,1215
CBr_3F	4,9531	CBr_2F_2	6,1400
CH_3F	5,5518	CF_4	6,2460
CH_2DF	5,5518	CF_3H	6,2460
CD_2HF	5,5518	CF_3D	6,2460
CD_3F	5,5518	CF_3Br	6,2460
CF_2Cl_2	5,8468	CF_3I	6,2460
$CHFBr_2$	5,9558	CF_3Cl	6,2460
CH_2F_2	6,1215	$CHBrF_2$	6,2799
CD_2F_2	6,1215	$CDBrF_2$	6,2799
Molecula	**f_c**	**Molecula**	**f_c**
CBr_3Cl	3,2659	$CBrCl_2H$	3,4204
CH_2ClBr	3,3250	$CBrCl_2D$	3,4204
$CHDClBr$	3,3250	CCl_4	3,4580
CD_2ClBr	3,3250	CCl_3H	3,4580
CBr_2Cl_2	3,3713	CCl_3D	3,4580
CF_2Cl2	3,4017	CCl_3F	3,4580
CBr_2ClD	3,4204	CCl_3Br	3,4580
CBr_2ClH	3,4204	CF_3Cl	3,4580

(continuate al pagina 22, columna 1)

. . . COORDINATAS NORMAL . . . . .

(cont. ab p. 21, col. 2)

Molecula	f_b	Molecula	f_b
$CHBrCl_2$	2,7000	CH_2Br_2	2,8965
$CDBrCl_2$	2,7000	$CHDBr_2$	2,8965
CH_2ClBr	2,7305	CD_2Br_2	2,8965
$CHDClBr$	2,7305	CBr_4	2,8976
CD_2ClBr	2,7305	CBr_3H	2,8976
CBr_3Cl	2,7525	CBr_3D	2,8976
CBr_2Cl_2	2,7530	CBr_3F	2,8976
CH_3Br	2,8631	CCl_3Br	2,8976
CH_2DBr	2,8631	CBr_2F_2	2,9132
CD_2HBr	2,8631	$CHFBr_2$	2,9467
CD_3Br	2,8631	CF_3Br	3,0352
CBr_2ClD	2,8704	$CHBrF_2$	3,3000
CBr_2ClH	2,8704	$CDBrF_2$	3,3000
Molecula	f_i	**Molecula**	f_i
CH_2I_2	2,2333	CD_3I	2,2467
CH_3I	2,2467	CF_3I	2,2890

(Va continuar in un numero futur)

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. . . NOVAS E MISCELLANEA . . . . .

(cont. ab p. 20, col.2)

→ Inter le themas discutite esseva le mechanismos de relaxation, le contar de coincidentias, le technicas del resonantia magnetic nucleari, le infrarubio remote, le radicales libere, e le spectros ex tubos de percussion. Applicationes tanto como le theoria esseva discutite.

Etiam tenite esseva un exhibition de equipamento.

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K. W. MEISSNER, Professor de Physica al Universitate Purdue a Lafayette in Indiana, organisa un symposio de spectroscopia que essera tenite in connexion con le convention del Association American pro le Avantiamento de Scientia a Indianapolis in Indiana ab le 26 al 30 de decembre 1957. Il habera plure discursos invitate tanto como un numero de breve discursos contribuite per altere spectroscopistas.

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UN ANALYSATOR INFRARUBIE es usate per le Division Reliance del Compania Eaton Manufacturing a Massillon in Ohio pro mesurar automaticamente e continuemente le amonta de CO_2 in un furno durante le tractamento calorific de filos.

Plus detalios es date in Vol. 16, No. 2, del periodico "Modern Precision" del Compania Leeds and Northrup (444 N. 16-th St., Philadelphia, Penna., S.U.A.).

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ROBERT M. FLEMING ha essite appunctate per le Compania Baird Associates-Atomic Instrument como un nove ingeniero de venditas in le region de Chicago. Le adresse temporari de Sr. Fleming es: Cassa Postal 297, Deerfield, Ill.

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SPECTROGRAPHOS e equipamento associate del Compania Bausch and Lomb Optical, tanto como servicio del mesme, nunc es disponibile ab le Applied Research Laboratories, Cassa Postal 1710, Glendale 5, California.

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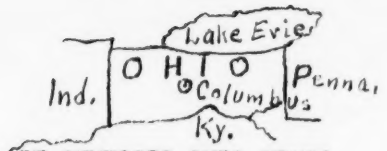
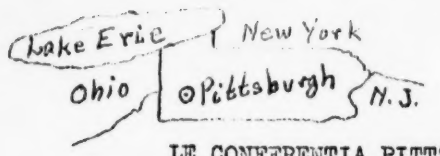


LE SYMPOSIO OHIO STATE

L E 11me symposio annue super le spectroscopia e le structura molecular al Universitate Ohio State essera ab le 10 al 14 de junio. Il habera discussiones del interpretationes del datos spectroscopic molecular tanto como del methodos pro le obtention de tal datos. De plus, il habera sessiones dedicate a ille aspectos del spectroscopia que es de interesse currente.

Un dormitorio va esser disponibile a illes qui desira reside al universitate durante le assemblea. Pro plus informationes o pro un exemplar del programma quando illo deveni disponibile, scribe a Prof. H. H. Nielsen, Departimento de Physica e Astronomia, Universitate Ohio State, Columbus 10, Ohio, Statos Unite de America.

Le discursos super le spectros electronic va esser tenite iste anno al fin del septimana pro le convenientia de illes qui desira vader etiam al conferentia super le thema "Ab Benzina al Graphite" al Universitate Buffalo le sequente septimana.



LE CONFERENTIA PITTSBURGH

L E 8ve conferentia Pittsburgh super le chimia analytic e le spectroscopia applicate esseva tenite ab le 3 al 8 de martio.

Le 1me Conferentia Pittsburgh super le spectroscopia applicate esseva tenite in 1940 pro discuter le applicationes industrial del spectroscopia. Isto esseva organisate per le laboratorio de spectroscopia del Universitate Pittsburgh sub le direction de Dr. Mary E. Warga. Primarimente ex isto e le 4 sequente assembleas, le Societate Spectroscopic de Pittsburgh esseva organisate in 1946, Iste societate ha acceptate un parte active in conferentias subsequente.

De interesse special al spectroscopistas molecular a iste conferentia esseva sessiones super le spectroscopia absorptionic general, studios molecular per le spectroscopia infrarubie, instrumentation in le spectroscopia infrarubie, le resonantia magnetic nucleari, le technica de discos pressate de KBr, e le spectroscopia infrarubie general.

De plus, il habeva un assemblea del Societate Coblentz e un exhibition de equipamentos.

. . . NOVAS E MISCELLANEA . . . . .
(cont. ab p. 22, col. 2)

LE ULTRAVIOLETTO IN VACUO es discutite per A. J. Mitteldorf in "The Spex Speaker" publicate per le Spex Industries, 205 Jamaica Ave., Hollis 23, New York. Isto es le prime de 2 parcellas e tracta del historia e del instrumentation. Le sequente parcella va tractar le applicationes.

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LE CHROMATOGRAPHIA gasose e su applicationes analytic futur es discutite in un articulo in le numero octobre-novembre 1956 (Vol. 1, No. 4) del "Flow Sheet" publicate per le compania Hoke, Inc., 138 Dean St., Englewood, N. J.

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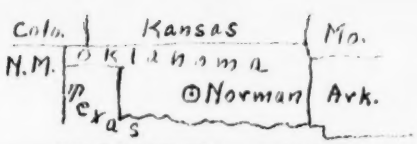

LE CONVENTION OKLAHOMA

L E Societate Physic American teneva un convention al Universitate Oklahoma in Norman le 1 e 2 de martio 1957. Un del sessiones esseva dedicate al spectroscopia molecular. D. C. Smith presideva a iste session.

Le programma comenciava con un discurso invitate per J. Rud Nielsen super le spectros Raman de compositos in differente statos de aggregation.

Tunc sequeva 8 breve discursos contribuite. Themas discutite in istos esseva le ionisation de LiH; le statos electronic de F_2; le spectros Raman e infrarubie de F_3C-CH_2Br, $F_3C-CHClBr$, e 1,2-difluorobenzina; le spectros infrarubie e le structuras geometric de complexos a transferentia de carga de halogenos con compositos aromatic; le spectro microundic de ClO_2 e un methodo pro le analyse del spectros de radicales libere asymmetric; le inequalitate del distantias ligaminic in ClO_2; e le effectos de alte pressiones super le spectro de absorption ultraviolette de benzina liquide in le region proxime al region visibile.

Summarios de iste 8 discursos es date in Bul. Am. Phys. Soc. 2 (1957) 99-100.

DISCUTITE IN LE "Instrument News" Vol. 8, No. 1, del Corporation Perkin-Elmer (Norwalk, Conn., S.U.A.) es instrumentos pro reactiones rapide, le analyse pro D_2O per uso del spectroscopia infrarubie, le reproducibilitate de spectrometros infrarubie, e le chromatographia gasose.

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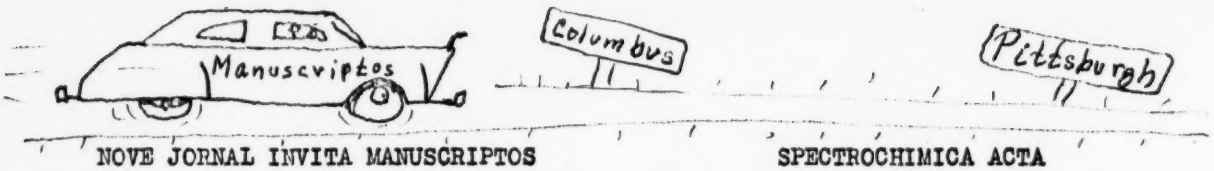
HIROMU MURATA, del Instituto de Recerca Technic Municipal Osaka (Kitaogi-machi, Kita-ku, Osaka, Japon), desira un subvention pro un periodo de recerca basic in le Statos Unite de America. Circa 3 annos retro, Dr. Murata passava plure menses in recerca al laboratorio de spectroscopia al Instituto Technologic de Illinois, e publicava un conto de iste labor in le J. Chem. Phys. Post su

(continuate al pagina 24, columna 1)



NOVE JORNAL INVITA MANUSCRIPTOS

L E sequente littera ha essite recipite ab Prof. Harald H. Nielsen:

Februario 1957

Car Collega:

Spectroscopistas molecular ha sentite depost alicun tempore que il ha un necessitate de un jornal pro le publication del resultatos de recerca original in lor campo in addition al presente jornales. Specialmente es isto ver proque le spectroscopia molecular es un campo inter le chimia e le physica. Nos spera que le nove jornal, le "Journal of Molecular Spectroscopy", va satisfacer iste necessitate. Le prime numero apparera in junio.

Es importante que le nove jornal comencia con bon articulos per bon autores. Consequentemente, il es sperate que le lectores de iste littera incoragiara autores qui prepara manuscriptos super le spectroscopia molecular a inviar los a nos pro consideration in re publication.

Le data final pro le recepta de manuscriptos pro le prime numero es le 15 de April 1957. Si vos pote assister in le obtention de articulos pro le nove jornal, isto essera vermente appreciate.

Sincermente,

Harald H. Nielsen,
Redactor
Journal of Molecular Spectroscopy
Departimento de Physica e Astronomia
Universitate Ohio State
Columbus 10, Ohio
Statos Unite de America

. . . NOVAS E MISCELLANEA . . . . .
(cont. ab p. 23, col. 2)

→ retorno a Japon, Dr. Murata ha publicate 11 articulos, principalmente in le J. Chem. Phys., e ha presentate plure discursos a assembleas scientific.

Si un subvention post-doctoral es disponibile in vostre laboratorio, per favor scribe directemente a Dr. Murata al supra-date adresse.

SPECTROCHIMICA ACTA

LE EMPHASE CAMBIANTE in le spectroscopia, causate specialmente per le vaste accrescimento in le studios del spectros molecular, ha facite desirabile un reorganisation del jornal, Spectrochimica Acta, comenciante in januario 1957, pro includer omne aspectos del spectros atomic e molecular, e pro obtener publication rapide de articulos.

Articulos essera acceptate super le spectros emissionic e absorptionic, le spectros microundic, le spectros Raman, e le spectros de fluorescentia. Le applicationes principal va includer le analyse qualitative e quantitative, le determination de structuras molecular, le designo de equipamentos, le description de nove methodos experimental, e le elucidation del theoria spectral general.

Etiam includite essera breve communicationes, reportos de assembleas spectroscopic, revistas, e reportos official del commissiones international.

Redactores del periodico es V.A. Fassel, F. A. Miller, E.H. S. van Someren, e H. W. Thompson. In addition, il ha un Consilio Redactorial Advisori de 39 spectroscopistas qui reside in omne partes del mundo.

Le precio de abonamento pro individuos es $11.00, pro institutiones $21.00, per anno. Le jornal es publicate per le Pergamon Press, 122 E. 55th St., New York 22, N. Y., S.U.A.; o 4 e 5 Fitzroy Square, London W.1; o 24 Rue des Ecoles, Paris, Francia. ô

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REVISTA DEL LITTERATURA

INTERFEROMETRO PRO LE INFRARUBIO

R. G. GREENLER del departimento de physica del Universitate Johns Hopkins a Baltimore in Maryland ha construite un interferometro infrarubie del typo Fabry-Perot e ha probate su potentia de resolution per uso del banda 10 μ de NH_3. Le interferometro ha 2 gruppos de plattas, un con un parve separation pro seliger le region spectral, le altere con un plus grande separation pro obtener le resolution final. Scansion del spectro es complite per un separation mechanic synchronisate de cata gruppo de plattas. Le plattas es coperite con multistratos de chlorido de tellurium e sodium.

Isto esseva reportate al convention in octobre del Societate Optic American. Vide summario in J. Opt. Soc. Am. 47 (1957) 120.

CONTORNOS DE BANDAS

B. I. STEPANOV ha calculate le contorno de bandas de absorption e emission de moleculas complexe per uso de un modello 1-dimensional de un oscillator harmonic classic e per prender in conto le cambiamentos in le coordinatas e le momentos durante le transitiones electronic vibrational. Un equation, que pote esser integrate numericamente, es date pro le probabilitate de absorption del frequentia ν, $a(\nu)\delta\nu$, como un function de 2 parametros molecular. Alicun contornos esseva calculate in detalio. Istos monstra le dependentia del contorno super le parametros e le temperatura.

Plus detalios es date in Izvest. Akad. S.S.S.R., Ser. Fiz. 20 (1956) 458-63. ô

SPECTROS A TRANSFERENTIA DE CARGA

H. MURAKAMI del Universitate Osaka ha publicate articulos IV e V in le serie super le spectros a transferentia de carga intermolecular.

In IV es tractate le structura electronic de complexos molecular. Previe labor es extendite pro prender in conto le distribution del densitate electronic in le orbitales molecular e le grado de extension de cata un del orbitales atomic. Pro facilitar le comparation inter le coefficientes calculate e observate del extinction molecular, le ration de istos pro 2 complexos con un componente commun esseva usate. Concordantia qualitative esseva obtenite inter le valores calculate e observate.

Articulo V tracta del complexos de halogenos e polymethylbenzina. Le considerationes statistic del previe labor super le complexos $X_2C_6H_{6-n}(CH_3)_n$ in le quales n = 0, 1, e 2 esseva extendite a casos pro le quales n = 3, 4, 5, e 6. Le valores calculate e observate del coefficientes de extinction molecular esseva comparate. Infelicemente, le resultatos experimental non es consistente. Consequentemente, nulle conclusion in re le validitate del valor calculate es possibile. (Problema de recerca!)

Pro plus detalios, vide Bull. Chem. Soc. Japan 28 (1955) 577-80; 581-83. Le articulos es in anglese. ô

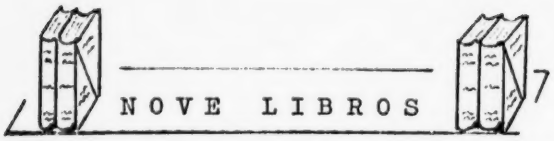
INTENSITATES DE LINEAS RAMAN

A. KH. KHALILOV e S. Z. RZAEVA ha trovate que le intensitates de lineas Raman producite per ligamines multiple accresce con accrescente frequentia del lumine incidente plus rapidemente que es expectate per le lege del 4te potentia. Le deviation es parve pro ligamines que es isolate e inconjugate.

Illes da un discussion theoric del rationes probabile pro iste deviation.

Lor articulo es publicate in Doklady Akad. Nauk Azerbaidzhan. S. S. R. 12 (1956) 441-46. Illo es in russe.

Spectros Raman esseva obtenite pro AcPh, MeOBz, $PhCH{:}CH_2$, e alteres. ô



• Quantum Chemistry -- An Introduction (Chimia Quantic -- Un Introduction). WALTER KAUZMANN. Academic Press, 111 5th Ave., New York 3; 1957. Paginas 744. Precio $12.00.

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L E O B J E C T I V O primari de iste libro es assister le chimistas in le comprehension del conceptos introducite in le chimia per le mechanica quantic. Un objectivo secundari es examinar criticamente le limitationes de multes de iste conceptos.

Le mathematica necessari es presentate in un forma extendite e comprehensibile. Plus spatio que usual es dedicate al natura e le serio del approximationes mathematic que debe esser usate in le solution de multe problemas chimic quantic.

Il ha partes principal super le fundo mathematic, principios general del mechanica quantic, systemas atomic, systemas molecular, e systemas in statos non-stationari.

-o-

• Statistical Mechanics -- Principles and Selected Applications (Le Mechanica Statistic -- Principios e Applicationes Seligite). TERRELL L. HILL. McGraw-Hill Book Co., 330 W. 42nd St., New York 36; 1957. Ps. 432. Precio $9.00.

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I S T E L I B R O summarisa le principios del mechanica statistic al nivello intermedie, e presenta un conto organisate e detaliate de certe applicationes de isto que ha essite disveloppate depost circa 1940. Le emphase es super le applicationes. Ille campos in le quales le plus importante recente avantiamentos ha occurrite es tractate in grande detalio.

Includite es un revista del mechanica quantic, un tractamento del ensembles statistic, e le relation del mechanica statistic al thermodynamica. Fluctuationes, gases imperfecte, functiones de distribution, e theorias de grilliage es etiam discutite.

**APRIL 29-MAIO 1. 8ve symposio annue super spectroscopia. Association American de Spectrographos. Chicago. (T.H. Zink, 4528 W. Division St., Chicago 51, Illinois.)

**APRIL 24-26. Colloquio annue super atomos e moleculas ex le recerca radioelectric. St. Malo, Britannia, Francia. (Prof. R. Freymann, Universitate Rennes, Rennes, Francia.)

**JUNIO. Curso laboratorial super le spectroscopia infrarubie applicate. Instituto Polytechnic de Brooklyn, Brooklyn, New York, S.U.A.

**JUNIO 10-14. 11me symposio annue super le spectroscopia e le structura molecular. Columbus. (H. H. Nielsen, Universitate Ohio State, Columbus 10, Ohio)

**JUNIO 17-28. Programma super le spectroscopia infrarubie: (1) Technicas (junio 17-21), (2) Applicationes (junio 24-28). (J. M. Austin, Summer Session Director, Room 7-103, Massachusetts Institute of Technology, Cambridge 39, Mass., S.U.A.)

**JULIO 8-10. 8ve symposio international de astrophysica. Thema: Lineas de Emission -- Stellas. Liege. (P. Swings, Instituto de Astrophysica, Universitate Liege, Liege, Belgica.)

**JULIO 9-13. Symposio del gruppo europee de spectroscopistas molecular. Freiburg, Germania. (R. Mecke, Instituto de Chimia, Hebelstrasse 38, Freiburg im Breisgau, Germania.)

**JULIO 30-AUGUSTO 3. Symposio super le ligage hydrogenic. Ljubljana, Yugoslavia. (D. Hadži, Kemični Institut Borisa Kidriča, Slov. Akademije Znanosti in Umetnosti, Hajdrihova 19, Ljubljana, Yugoslavia.)

**1958. Commission Juncte de Spectroscopia. Moscova, U.S.S.R.; o Ottawa, Canada. (P. F. A. Klinkenberg, Laboratorio Zeeman, Muidergracht 4, Amsterdam C, Hollanda.)

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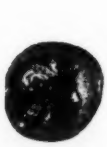

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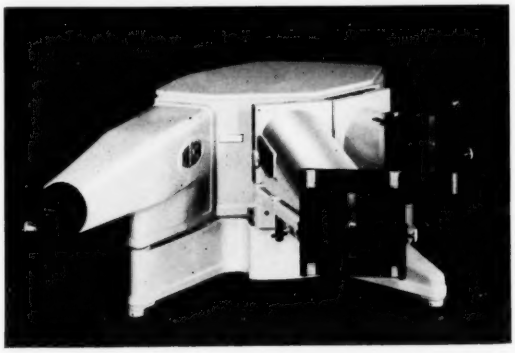

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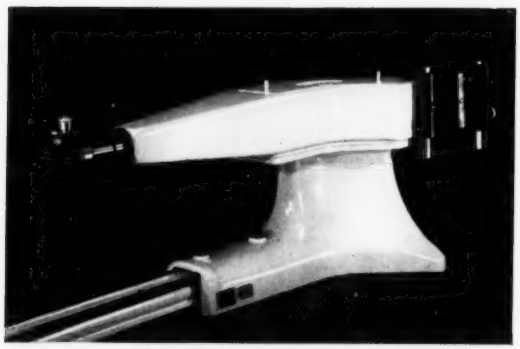

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TABULAR COMPARISON OF PRISM SPECTROGRAPHS

Instrument		Prism		Lens		Slit	Size of Plate	Spectrum Range	Length of Spectrum
No.	Name	Angle	Height and Length of face	Focal Length D	Aperture				
E742/3	Large Quartz	30°	56×94 mm.	170 cm.	75 mm.	F 1386	10×4 in. / 25·4×10·2 cm also 10×2 in.* / 9×24 cm.*	1910—8,000 A	2,000—8,000 A = 67 cm.
E 478 / E 742/4	Large Glass Quartz as above	26°	56×94 mm.	170 cm.	75 mm.	F 1386	10×4 in. / 25·4×10·2 cm also 10×2 in.* / 9×24 cm.*	3,700—12,000 A	4,000—8,000 A = 32 cm.
E 498	Medium Quartz Flat Field	60°	41×65 mm.	60 cm.	51 mm.	F 1386	As E 478	2,000—10,000 A	2,000—10,000 A = 22·1 cm.
E 495	Med. Glass	60°	41×65 mm.	60 cm.	51 mm.	F 1386	As E 478	3,700—8,000 A	3,700—8,000 A = 14·0 cm.
E 474	Infra-red Glass	60°	41×65 mm.	60 cm.	51 mm.	F 1386	As E 478	4,000—15,000 A	4,000—14,000 A = 17·6 cm.
E 484	Small Qtz.	60°	17×22 mm.	20 cm.	26 mm.	F 1497	4¼×3¼ in. also 5×4 in.* / 9×12 cm.*	1,850—8,000 A	1,850—8,000 A = 8·5 cm.
E 612/3	Large Ap. 2 Prism Glass	63°	86×164 mm. / 86×130 mm.	13·2 cm.	89 mm.	F 1386	4¼×3¼ in. only	Mean inverse dispersion on plate 64 A/mm.	
E 612/4	Do.	63°	86×164 mm. / 86×130 mm.	45 cm.	101 mm.	F 1386	4¼×3¼ in. only	Mean inverse dispersion on plate 16 A/mm.	
E 517	Large Ap. Qtz.	60°	41×65 mm.	20·6 cm. at 0·254μ	51 mm.	F 1497	4¼×3¼ in. only	2,000—8,000 A	2,000—8,000 A = 6·5 cm.
E 518	Large Ap. Glass	Rutherfurd Compound Prism		21 cm.	51 mm.	F 1497	4¼×3¼ in. only	4,000—8,000 A	4,000—8,000 A = 3·0 cm.

Symmetrical Slit F 1386 has double rate of opening
Symmetrical Slit F 1497 has single rate of opening
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